

NOMENCLATURAL NOTES FOR THE NORTH AMERICAN FLORA. I.

John T. Kartesz & Kancheepuram N. Gandhi

North Carolina Botanical Garden, University of North Carolina. CB# 3280
Coker Hall, Chapel Hill, North Carolina 27599-3280 U.S.A.

ABSTRACT

Nomenclatural clarifications are provided for names in *Ilex*, *Dentaria*, *Teucrium*, *Nuphar*, *Spiraea*, *Synthyris* and *Calibrachoa*. New combinations are made where necessary.

KEY WORDS: Nomenclature, North America, floristics.

In preparation of a revised *Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland* (Kartesz 1990), a number of nomenclatural notes are deemed necessary. These notes will appear in subsequent publications. This is the first of a series of such notes.

AQUIFOLIACEAE

Ilex montana Torr. & Gray, a manuscript name, was validated by Gray (1848) in his *Manual of Botany*. In 1856, Gray used the name *I. monticola* Gray and cited *I. montana* as a synonym. Both names are based on the same type; hence, the name *I. monticola* is superfluous. The names *I. mollis* Gray and *I. beadlei* Ashe are considered conspecific with *I. montana*, with the last name representing the earliest valid name in this complex.

Subsequently, these four names were treated at infraspecific rank by various authors (refer to Wunderlin & Poppleton 1977). Alphonso Wood (1870) published the combination *I. amelanchier* M.A. Curtis var. *monticola* Wood, to refer to a member of this complex. Although Wood did not cite Gray's reference for this varietal epithet, it has been attributed to "(Gray) Wood" by later authors, such as Wunderlin & Poppleton (*l.c.*) and Little (1979), who suggested that Wood had based his variety *monticola* on Gray's species *montana*. However, Wood described the variety and provided a type, therefore his epithet *monticola* is not tied to Gray's *montana*. Wunderlin & Poppleton transferred the complex to *I. ambigua* (but excluding *I. amelanchier* var. *amelanchier*) and made a new combination: *Ilex ambigua* (Michaux) Torr. var. *monticola* (Gray) Wunderlin & Poppleton. This new combination is illegitimate, since it is based on an epithet never described by Gray. However, it

is effectively published and prevents the use of the combination *I. ambigua* var. *monticola* based on Wood's epithet, which would have had priority at the variety level for the taxon in question. Therefore, the combination *I. ambigua* var. *monticola* (Wood) cannot be used because it would be a later homonym of the combination of Wunderlin & Poppleton. The next earliest combination involving a variety within what is treated here as *I. ambigua*, is *Ilex montana* var. *mollis* (Gray) Britton (1890). This combination created the autonym *Ilex montana* var. *montana*. Since autonyms have priority over the names which cause them to be formed, the oldest valid varietal name in this complex is *montana*, and accordingly Ahles' combination is correct at the varietal rank for this complex:

Ilex ambigua var. *montana* (Gray) Ahles, J. Elisha Mitchell Sci. Soc., 80:173. 1964.

BRASSICACEAE

E.L. Greene transferred *Dentaria californica* Nutt. and *D. integrifolia* Nutt. to the genus *Cardamine*, as *C. californica* (Nutt.) Greene (Greene 1891) and *C. integrifolia* (Nutt.) Greene (Greene 1886-87). Unfortunately, the latter name is a later homonym of *C. integrifolia* Gilib. (Fl. Lituan. 2:68. 1782) and hence illegitimate. If *C. californica* and *C. integrifolia* (Nutt.) Greene are considered conspecific, then the correct name for this complex is *C. californica*. Kartesz (1990) recognizes three varieties in *C. californica*: var. *californica* (incl. *Dentaria californica* var. *integrifolia* (Nutt.) Detling), var. *pachystigma* O.E. Schulz and var. *sinuata* (Greene) O.E. Schulz.

LAMIACEAE

Teucrium occidentale Gray was published in 1878 (Syn. Fl. N. Amer. 2[1]:349), while *T. boreale* Bicknell appeared in 1901 (Bull. Torrey Bot. Club 28:171). *Teucrium boreale* was reduced to a variety in 1908, as *T. occidentale* var. *boreale* (Bicknell) Fern. (Rhodora 10:85). Likewise (in 1946), *T. occidentale* was also reduced to varietal status as *T. canadense* L. var. *occidentale* (Gray) McClint. & Epl. (Brittonia 5:499). Shinnars (1963) considered that a circumscription of a variety in *T. canadense* would include both *T. boreale* and *T. occidentale*. Shinnars chose the epithet *boreale* for this variety of *T. canadense*. He based his view on the belief that at varietal rank, *boreale* has priority over *occidentale*, since *T. boreale* was reduced to a variety prior to that of *T. occidentale*. Hence, Shinnars made a new combination: *T. canadense* var. *boreale* (Bicknell) Shinnars.

Although acceptable at the time, due to changes in the Code, Shinnars' interpretation of the situation is incorrect according to the present Code of Botanical Nomenclature. Although *T. occidentale* var. *boreale* was published

prior to *T. canadense* var. *occidentale*. publication of the combination *T. occidentale* var. *boreale* created the autonym *T. occidentale* var. *occidentale*, which has priority over var. *boreale*. Therefore, the correct name for the plant represented by the types of *T. boreale* and *T. occidentale*, when recognized as a variety of *T. canadense*, is *T. canadense* var. *occidentale*. Soil Conservation Service (1982) also took a similar stand in accepting *T. canadense* var. *occidentale* as the correct name for this complex.

NYMPHAEACEAE

E.O. Beal (1956) treated *Nymphaea macrophylla* Small as a subspecies of *Nuphar luteum* (L.) Sibth. & Sm.: *Nuphar luteum* ssp. *macrophyllum* (Small) Beal. R.B. Kaul (1986) followed Beal's treatment and cited *Nymphaea advena* Ait. as a synonym. With the inclusion of *Nymphaea advena* as a synonym of this subspecies, a new combination is necessary. The necessity of the new combination is caused by the combination of *Nymphaea advena* ssp. *erythraea* Miller & Standley in 1912, thus creating the autonym *Nymphaea advena* ssp. *advena*, which will have priority at the subspecies level. Therefore, the new combination is proposed here to supersede *Nuphar luteum* ssp. *macrophyllum* (Small) Beal.

Nuphar luteum ssp. *advenum* (Ait.) Kartesz & Gandhi. *comb. nov.* **BA-SYONYM:** *Nymphaea advena* Ait., Hort. Kew., Ed. 1, 2:226. 1789.

Nymphaea advena ssp. *erythraea* Miller & Standley. Contr. U.S. Natl. Herb. 16:91. 1912.

Nymphaea macrophylla Small, Bull. Torrey Bot. Club 25:465. 1898.
Nymphaea advena var. *macrophylla* (Small) Miller & Standl., Contr. U.S. Natl. Herb. 16:89. 1912. *Nymphozanthus advena* (Ait.) Fern. var. *macrophylla* (Small) Fern., Rhodora 21:186. 1919. *Nuphar luteum* ssp. *macrophyllum* (Small) Beal, J. Elisha Mitchell Sci. Soc. 72:332. 1956.

ROSACEAE

The name *Spiraea densiflora* has been attributed to Nutt. (Greenman 1898; Jepson 1936), Nutt. ex Torr. & Gray (Hitchcock & Cronquist 1961), or Nutt. ex Greenm. (Soil Conservation Service 1982). Torrey & Gray (1940) discussed this Nuttalian manuscript name in *S. betulifolia*. Their discussion implied that they treat *S. densiflora* as a synonym of *S. betulifolia* (c.f. Greenman; Jepson). Hence, *S. densiflora* cannot be attributed to Torrey & Gray. Greenman's usage of this name validated it. Hence, the correct authority for *S. densiflora* is Nutt. ex Greenm. For *S. densiflora*, the following two names have been treated as synonyms: *S. betulifolia* Pallas var. *rosea* Gray and *S. arbuscula* Greene.

In Kartesz (1990), the *S. densiflora* complex will be recognized as a variety of *S. splendens* Baumann ex K. Koch (Monats. Ver. Bef. Gart. Preuss. 18:294. 1875), and a new combination is proposed here.

Spiraea splendens Baumann ex K. Koch var. *rosea* (Gray) Kartesz & Gandhi, *comb. nov.* BASIONYM: *Spiraea betulifolia* Pallas var. *rosea* Gray, Proc. Amer. Acad. Arts 8:381. 1873.

Spiraea arbuscula Greene, Erythea 3:63. 1895.

Spiraea densiflora Nutt. ex Greenm., Bot. Gaz. 25:261. 1898.

SCROPHULARIACEAE

Synthyris stellata Pennell, found in Oregon and Washington, is closely related to *S. missurica* (Raf.) Pennell. C.L. Hitchcock, *et al.* (1959) remarked that *S. stellata* (mentioned as forms of *S. missurica* found in and about Columbia Forge, OR) was distinct with more sharply toothed leaves and better developed bracts beneath the inflorescences. But C.L. Hitchcock, *et al.* considered these traits to represent only slight variations and treated *S. stellata* as a synonym of *S. missurica*. However, Soil Conservation Service (1982) considers these two species as distinct.

We suggest that *S. stellata* be considered as a subspecies of *S. missurica* and propose a new combination.

Synthyris missurica ssp. *stellata* (Pennell) Kartesz & Gandhi, *comb. nov.* BASIONYM: *Synthyris stellata* Pennell, Proc. Acad. Nat. Sci. Philadelphia 85:94. 1933.

SOLANACEAE (Contributed by W.G. D'Arcy, Missouri Botanical Garden)

When he described the genus *Petunia* in 1803, A.L. Jussieu also described two species, *P. parviflora* and *P. nyctaginiflora*. The first of these, *P. parviflora*, was selected as the lectotype species by several later botanists, for example Cabrera (1954: 417), most of whom worked independently but probably had in mind the monograph of Fries (1911). Fries placed *P. parviflora* into his subgenus *Eupetunia* (or "true" *Petunia*). His other species, *P. nyctaginiflora*, which is now correctly known as *P. axillaris* (Lam.) B.S.P., was placed into a second subgenus *Pseudonicotiana*.

Until recently, *Petunia parviflora* and *P. nyctaginiflora* were considered to be congeneric, and to embrace *Petunia hybrida*, or *Petunia violacea*, the garden petunia. In a series of papers which looked at chromosomes, attempted hybridizations, and examined gross foliage and floral morphology, workers in the Netherlands (Wijsman & DeJong 1985) have concluded that *Petunia parviflora* and *P. axillaris* are not congeneric, and that one of them must be placed in a different genus.

A proposal was made (Wijnands, *et al.* 1986) under the International Botanical Code to formally conserve *P. nyctaginiflora* A.L. Juss. as a new type for *Petunia*. Although this contradicts the traditional practice of adherence to the first lectotypification, the Committee for Spermatophyta (Brummitt 1989: 301) has chosen by a vote of 10 to 1 to recommend this conservation action. "The proposal is to conserve the generic name . . . so that the common garden *Petunia* still belongs to *Petunia*."

It is almost (but not absolutely) unknown for the Committee's recommendations to be overruled, and it is likely that the Netherland workers are correct in their separation of the traditional *Petunia* into the two genera. Therefore, consideration of a new correct name for the "Wild *Petunia*" or "Seaside *Petunia*" (Correll & Johnston 1970: 1404) is in order. The next earliest generic name is *Calibrachoa*, described by Llave & Lex. in 1825. The paper with their generic description included an excellent drawing of the plant they called *C. procumbens* Llave & Lex. The earliest name for this species is *Petunia parviflora* A.L. Juss., and as the combination of this name in *Calibrachoa* seems not yet to have been made, it is made here.

***Calibrachoa parviflora* (Juss.) D'Arcy, *comb. nov.* BASIONYM: *Petunia parviflora* A.L. Jussieu, Ann. Mus. Natl. Hist. Nat. 2:216. 1803.**

Calibrachoa procumbens La Llave & Lexarza, Novorum vegetabilium descriptiones fasc. 2:3. 1925. [fasc. 2: first set of pagin., 10; repr. in *Naturaleza* 5: Apendice. 1881].

Other synonyms are also known for this species and other transfers from *Petunia* into *Calibrachoa* will be needed consequent nomenclatural actions noted above, but they will not be presented here.

This species occurs in Texas, and other southern states as a low growing paludal weed bearing little resemblance to the garden petunia. It ranges at least as far south as central Argentina, and it is probably a native of South America.

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LITERATURE CITED

- Beal, E.O. 1956. Taxonomic revision of the genus *Nuphar* Sm. of North America and Europe. J. Elisha Mitchell Sci. Soc. 72:317-346.
- Britton, N.L. 1890. New or noteworthy North American phanerogams-III. Bull. Torrey Bot. Club 17:310-316.
- Brummitt, R.K. 1989. Report of the Committee for Spermatophyta: 36. Taxon 38:299-302.
- Cabrera, A.L. 1954. *Manual de la Flora de los Alrededores de Buenos Aires*. Acme, Buenos Aires.
- Correll D.S. & M.C. Johnston. 1970. *Manual of the Vascular Plants of Texas*. Texas Research Foundation, Renner, Texas.
- Fries, R.E. 1911. Die Arten der Gattung *Petunia* Kung. Svensk. Vet. Handl. 46(5):1-72.
- Gray, A. 1848. *Manual of Botany*, Ed. 1. James Munroe & Company, Boston.
- . 1856. *Manual of Botany*, Ed. 2. George P. Putnam & Co., New York.
- Greene, E.L. 1886-87. Notes on the Botany of Santa Cruz Islands. Bull. Calif. Acad. Sci. 2:377-418.
- . 1891. *Flora Franciscana*, Part 2. Culberry & Co., San Francisco.
- Greenman, J.M. 1898. Some new and other noteworthy plants of the Northwest. Bot. Gaz. 25:261-265.
- Hitchcock, C.L. & A. Cronquist. 1961. *Vascular Plants of the Pacific Northwest*, Part 3. University of Washington Press, Seattle.
- Hitchcock, C.L., A. Cronquist & M. Ownbey. 1959. *Vascular Plants of the Pacific Northwest*, Part 4. University of Washington Press, Seattle.
- Jepson, W.L. 1936. *A Flora of California*. Vol. 2. Associated Students Store. University of California, Berkeley.
- Jussieu, A.L. 1803. Sur le *Petunia*, genre nouveau de la famille des plants solanees. Ann. Mus. Natl. Hist. Nat. 2:214-216, plate 47.
- Kartesz, J.T. 1990. *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*, Ed. 2 (in press).

- Kaul, R.B. 1986. Nymphaeaceae, in Great Plains Flora Association, *Flora of the Great Plains*. University Press of Kansas, Lawrence.
- Little, E.L., Jr., 1979. Checklist of United States Trees (Native and Naturalized). Agriculture Handbook No. 541. Forest Service, U.S.D.A., Washington, D.C.
- Shinners, L.H. 1963. Notes. Sida. 1:182-183. Soil Conservation Service. 1982. National List of Scientific Plant Names, Vols. 1 & 2. U.S.D.A.-S.C.D., Govt. Printing Office, Washington, D.C.
- Torrey, J. & A. Gray. 1840. *Flora North America*, Vol. 1. Wiley & Putnam, New York.
- Wijnands, D.O., J.J. Bos, W.J.W. Wijsman, F. Schneider, C.D. Brickell & K. Zimmer. 1986. (856) Proposal to conserve 7436 *Petunia* with *P. nyctaginiflora* as *typ. cons.* (Solanaceae). Taxon 35:748-749.
- Wijsman, H.J.W. & J.H. DeJong. 1985. On the interrelationships of certain species of *Petunia* IV. Hybridization between *P. linearis* and *P. calycina* and nomenclatorial consequences in the *Petunia* group. Acta Bot. Neerl. 34:337-349.
- Wood, A. 1870. *Amer. Bot. Fl.*, Ed. 1. A.S. Barnes & Co., New York.
- Wunderlin, R.P. & J.E. Poppleton. 1977. The Florida species of *Ilex* (Aquifoliaceae). Florida Scientist 40:7-21.